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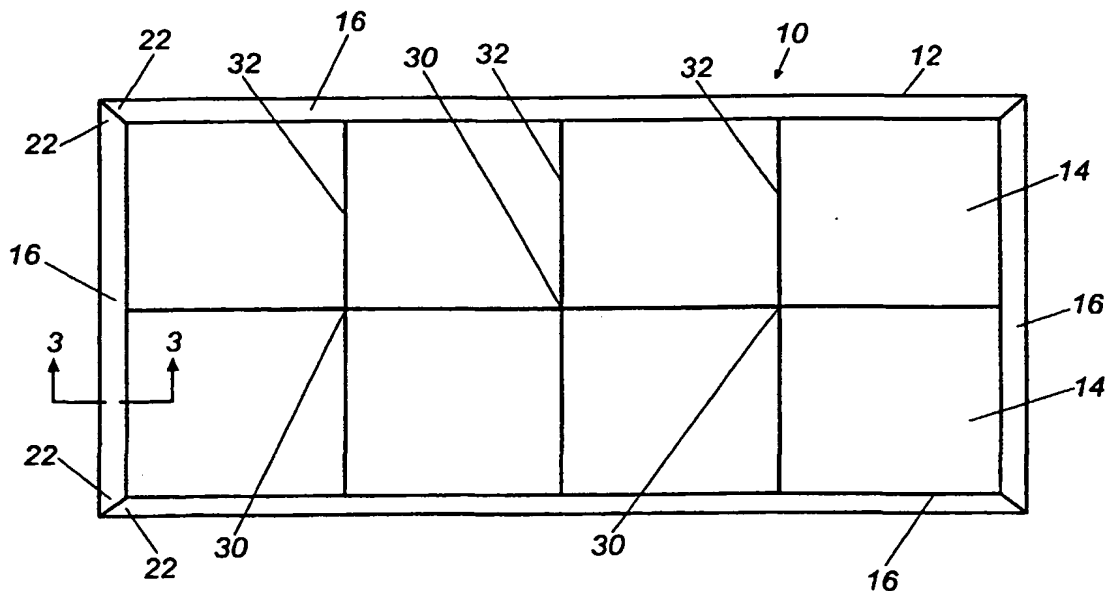
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[Continued on next page]

(54) Title: AREA FLOOR COVERING



(57) Abstract: A system and method for forming an area rug using at least one replaceable wear surface positioned on a floor or subfloor. The system includes a base and at least one replaceable wear surface, of which both may be cut to fit a floor space of almost any shape. The system may be attached to the floor using an adhesive, a double-sided tape, or a cloth, with or without adhesive, or not attached at all. The cloth can be applied coextensively to the base and replaceable wear surface, or intermittingly, such as only at intersecting corners. The system can be sold to consumers as a self contained kit or as a group of components that can be separately selected.

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AREA FLOOR COVERING

RELATED APPLICATION

5 This application claims the benefit of U.S. Provisional Application No. 60/233,680
filed on September 19, 2000.

FIELD OF INVENTION

 The invention generally relates to the field of carpet and floor covering,
10 specifically to the area of self contained flooring systems.

BACKGROUND OF THE INVENTION

 Floor covering has included a vast array of materials such as ceramic tile, wood,
carpet, carpet tile and other materials. Equally as numerous have been the methods for
15 installing and securing flooring, either permanently or temporarily, to subfloors.
Traditionally, among other approaches, flooring systems have used surrounding walls as a
method of containing and securing the flooring material. However, this method provides
very little flexibility to the installer of the flooring system. Using existing walls as lateral
support for flooring materials requires that the installer invest substantial time and labor
20 to fit the flooring materials to the existing subfloor. Accordingly, a need exists for a
method or system that allows floor tiles to be contained and laterally supported by a
means other than the existing walls of the structure.

SUMMARY OF THE INVENTION

25 This invention is a self contained kit or a group of components from which a
purchaser can assemble an area rug. A four-sided frame surrounds modules of carpet or
carpet tile bounded by the frame, which also provides transition from the carpet to the
floor on which the assembly lies. Frame members may be attached to a fabric that
underlies the modules, and that fabric may bond to the modules or the floor or both to
30 prevent lateral movement. The frame members may be made of plastic, wood, metal,
ceramic, marble, or other suitable materials.

Objects of this invention include:

To provide components salable through retail outlets for producing an area rug.

To provide systems and methods for containing replaceable wear surfaces without reliance on interior walls of a room for lateral support.

5 To provide an efficient method of installing replaceable wear surfaces in any room with a minimal investment of time and labor.

As the following description and accompanying drawings make clear, these and other objects are achieved by this invention.

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BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a top plan view of an area rug of this invention.

Figure 2 is a side elevation view of the rug of Figure 1.

Figure 3 is a cross-sectional view of a portion of a base member and of a replaceable wear surface of this invention taken at 3-3 in Figure 1.

15 Figure 4 is a cross-sectional view of an alternative embodiment of the base member and local surface similar to Figure 3.

Figure 5 is a perspective view of a collaboration of pieces for forming an area rug.

DETAILED DESCRIPTION OF THE INVENTION

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Figure 1 shows the area rug flooring system 10 of this invention. The flooring system 10 includes an exterior base 12 and multiple replaceable wear surfaces 14. The replaceable wear surfaces 14 maybe carpet tiles or hard surface modules composed of materials such as, but not limited to hardwoods or ceramics, and can include a surface portion 15 and a base 17.

25

The exterior base 12 normally includes four sides 16 sized to receive multiple replaceable wear surfaces 14. However, the exterior base 12 may be comprised of any number of sides 16 and any number of shapes, including triangular, circular, and any shape in between. The replaceable wear surfaces 14 may be assembled in various combinations and patterns to suit the needs and tastes of the consumer. The sides 16 typically are joined at a 90° angle to form a square or rectangular base 12 around the area rug 10. Alternatively, sides 16 may be joined at other angles to form various shapes to suit the needs of the layout of the existing subfloor 24. Sides 16 may be joined in a

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number of ways including adhesives, snap fittings, sonic welding, splines, nails, screws, or other means of attachment. The ends 22 of the sides 16 assembled with 90° angles usually are cut at 45° angles to make miter joints between ends 22. Alternatively, cope and stick, butt joints, or other joints may be used.

5 Figure 2 is a side elevation view of the system 10. The exterior base 12 can be constructed of a variety of materials including plastics, wood, rubber, metals, ceramics, marble and other resilient and workable materials. Extruded plastic or aluminum profiles are particularly desirable for use as exterior base 12.

10 Figure 3 is a cross-sectional view taken at 3-3 of Figure 1 showing a replaceable wear surface 14 disposed within the exterior base 12. The base 12 can include a top surface 26, a bottom surface 36, a exterior surface 27, and an interior surface 18. The base 12 includes a rounded-over region 25 positioned between the exterior surface 27 and the top surface 26 or between the interior surface 18 and the top surface 26, or both. The replaceable wear surface 14 fits within a recess 20 located in the interior surface 18 of the
15 exterior base 12.

 The replaceable wear surface 14 and the exterior base 12 can be attached to each other and, optionally to the subfloor 24, through a number of methods including the use of a double-sided tape 29 or a cloth or fabric 28, which may be knitted, woven, non-woven or of other structures. The cloth 28 could be used to attach both the exterior base
20 12 and the replaceable wear surface 14 to the subfloor 24, only the exterior base 12 to the subfloor, or only the replaceable wear surface 14 to the subfloor. Additionally, the cloth 28 could be used to attach the entire underside 34 of the replaceable wear modules 14 and the underside 36 of the exterior base 12. In yet another embodiment, the cloth 28 could be used intermittently to secure together, or to the subfloor 24, only the corners 30 or
25 edges 32 of the underside 34 of the replaceable wear surfaces 14. Alternatively, the flooring system 10 may be used with no cloth 28 at all. Instead, the exterior base 12 could be secured to the subfloor 24 using a rubber mat, an adhesive, a peel and stick system, or a double-sided tape 29.

 The cloth 28 may, for instance, be an open mesh with substantial interstices, and
30 the strands may be coated with a high friction material or with a pressure sensitive adhesive. For instance, cloth 28 may be LOK-LIFT® material available from Optimum

Technology, Inc. and described in U.S. Patent No. 5,120,587, which is incorporated herein by reference. Other grid and fabric structures are also usable for cloth 28.

Figure 4 is a cross-sectional view similar to Figure 3, showing an alternative embodiment of a side 16 used to make an exterior base 12. In Figure 4, a replaceable wear surface 14 is disposed within the exterior base 12. In the alternative embodiment shown in Figure 4, the replaceable wear surface 14 is flush with the top surface 26 of the exterior base. The side 16 can have a thickness equal to or approximately equal to the thickness of the replaceable wear surface 14. However, the side 16 could also have a thickness substantially less than the thickness of replaceable wear surface 14.

The components of flooring system 10 may be sold unassembled so that the purchaser may assemble the exterior base 12 by joining sides 16 and, if used, attaching cloth 28. Replaceable wear surfaces 14 are then positioned within exterior base 12 in an arrangement chosen by the purchaser.

The exterior base 12 may be attached to the cloth 28 with an adhesive on the cloth 28, additional adhesive, a mechanical lock or not at all. Exterior base 12 may be attached directly to a subfloor with a double-sided tape 29, a peel and stick system, or not at all. If a high friction cloth 28 is used with the replaceable wear surface 14, the cloth 28 and the replaceable wear surface 14 can act as one unit, and the exterior base 12 can be positioned around the replaceable wear surface 14 without the need for attachment to the cloth 28 or replaceable wear surface 14.

The system described above can be marketed and sold as a kit 38, as shown in Figure 5. For instance, the system can be contained within a container 40. The container 40 may be a pasteboard or other box. Alternatively, the system can be sold as individual components so that a consumer can select the pieces, such as sides 16, replaceable wear surfaces 14, cloth 28, and adhesives. Further, the sides 16 may be offered in various thickness, lengths, colors and designs. The replaceable wear surfaces 14 may also be offered in various sizes, colors and designs. The system may further include a knife or other means for cutting sides 16 to desired lengths.

An advantage of this invention is that it provides systems and methods for installing free lay replaceable wear surfaces with a minimal investment of time and labor.

Another advantage of this invention is that it provides systems and methods for containing many types of hard and soft replaceable wear surfaces without the need for lateral support or containment typically provided by interior wall surfaces.

5 Yet another advantage of this invention is that it provides systems and methods for a flooring structure where the surface may be easily replaced.

Still another advantage of this invention is that modules of the replaceable wear surface may be assembled in multiple configurations in order to obtain multiple designs with the same components.

10 An additional advantage of this invention is that the rug may be installed in oddly shaped rooms with a minimal investment of time and labor.

While various embodiments of this invention have been described above, these descriptions are given for purposes of illustration and explanation. Variations, changes, modifications and departures from the systems and methods disclosed above may be adopted without departure from the spirit and scope of this invention.

CLAIMS

We claim:

- 1 1. A system for forming an area rug, comprising:
 - 2 (a) at least one replaceable wear surface having at least one edge, an
 - 3 underside and a top surface; and
 - 4 (b) at least one side forming an enclosed base having an underside, at
 - 5 least one interior side wall, at least one exterior side wall, and a top surface.
- 1 2. The system of claim 1, wherein the enclosed base further comprises
- 2 at least two sides.
- 1 3. The system of claim 2, wherein the at least two sides comprise at
- 2 least two ends and means for attaching the ends to each other.
- 1 4. The system of claim 3, wherein the means for attaching the ends to
- 2 each other is selected from the group consisting of adhesives, snap fittings, nails,
- 3 and screws.
- 1 5. The system of claim 3, wherein the at least two sides comprise two
- 2 ends shaped so that when joined, the two ends form a miter joint.
- 1 6. The system of claim 3, wherein the at least two ends are capable of
- 2 being joined using a joint selected from the group consisting of a cope and stick
- 3 joint and a butt joint.
- 1 7. The system of claim 1, further comprising a cloth attachable to the
- 2 underside of at least one other system component.
- 1 8. The system of claim 7, wherein the cloth is attachable to the base.

- 1 9. The system of claim 8, wherein the cloth is attachable to only a
2 portion of the base.
- 1 10. The system of claim 7, wherein the cloth is attachable to the at least
2 one replaceable wear surface.
- 1 11. The system of claim 10, wherein the cloth is attachable to only a
2 portion of the at least one replaceable wear surface.
- 1 12. The system of claim 7, wherein the cloth is attachable to the entire
2 undersides of the base and the replaceable wear surface.
- 1 13. The system of claim 7, further comprising adhesive on the cloth.
- 1 14. The system of claim 1, further comprising adhesive on the underside
2 of the base.
- 1 15. The system of claim 1, further comprising a rubber mat positionable
2 on the underside of the base.
- 1 16. The system of claim 1, further comprising a double-sided tape
2 positionable on the underside of the base.
- 1 17. The system of claim 1, wherein at least one interior side wall
2 defines a recess for receiving a portion of the at least one replaceable wear surface.
- 1 18. The system of claim 1, wherein the top surface of the base is
2 generally flush with the top surface of the at least one replaceable wear surface.
- 1 19. The system of claim 1, wherein the top surface of the base is joined
2 to the exterior side wall of the base by a curved surface.

1 20. The system of claim 1, wherein the top surface of the base is joined
2 to the interior side wall of the base by a curved surface.

1 21. A system for forming an area rug, comprising:

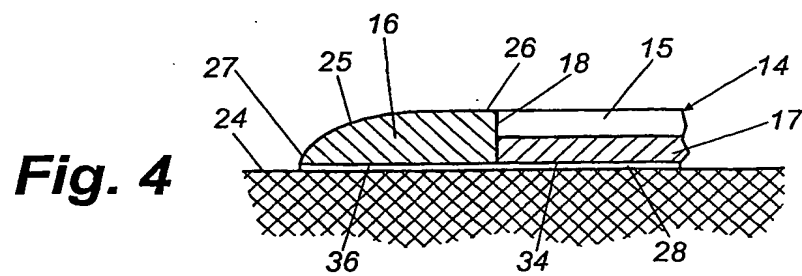
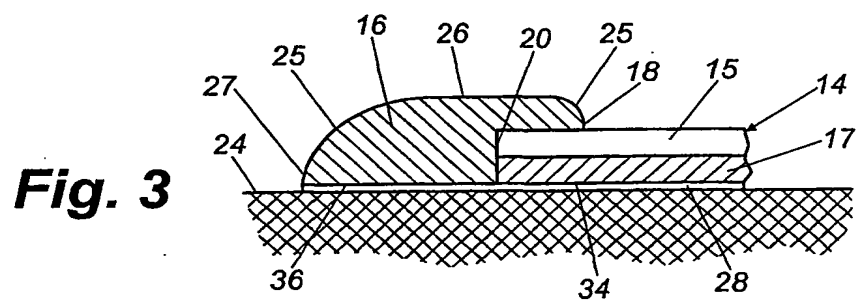
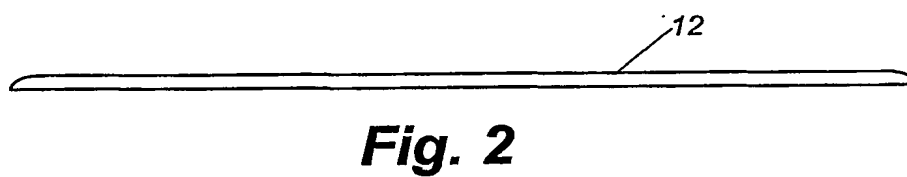
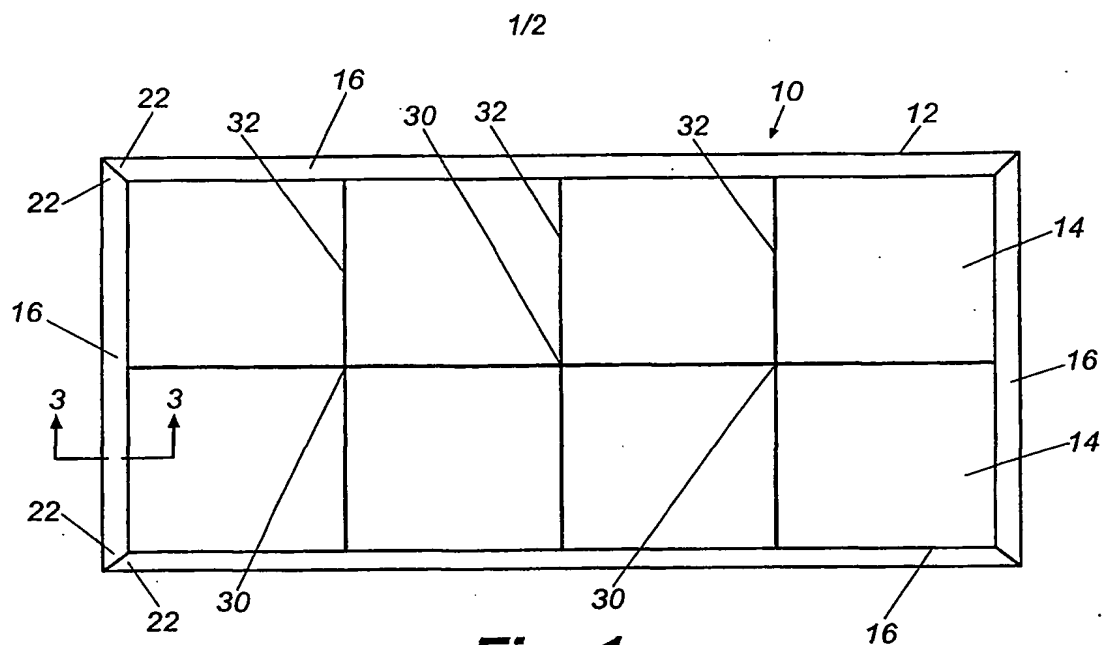
2 (a) at least one replaceable wear surface having at least one edge, an
3 underside and a top surface;

4 (b) at least one side forming an enclosed base having an underside, at
5 least one interior side wall, at least one exterior side wall, and a top surface;

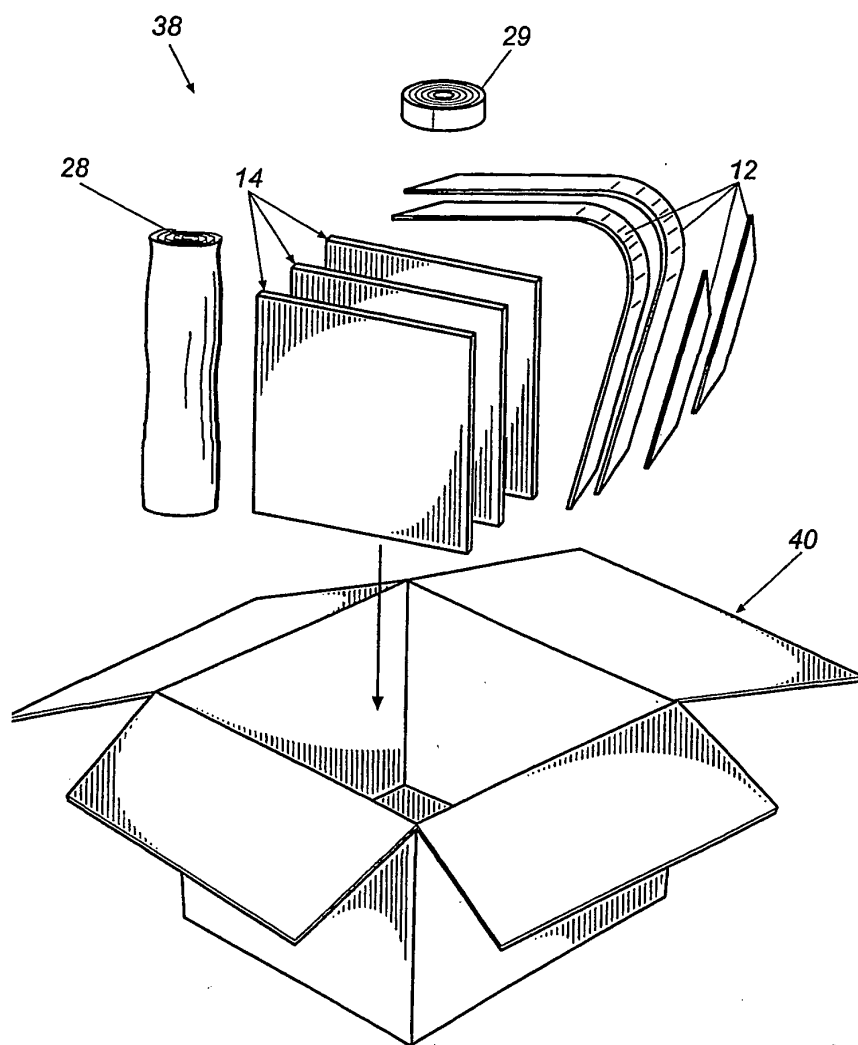
6 (c) a recess for receiving a portion of the at least one replaceable wear
7 surface, the recess being defined by the at least one interior side wall;

8 (d) a first curved surface joining the exterior side wall and the top
9 surface of the base; and

10 (e) a second curved surface joining the interior side wall and the top
11 surface of the base.



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**Fig. 5**

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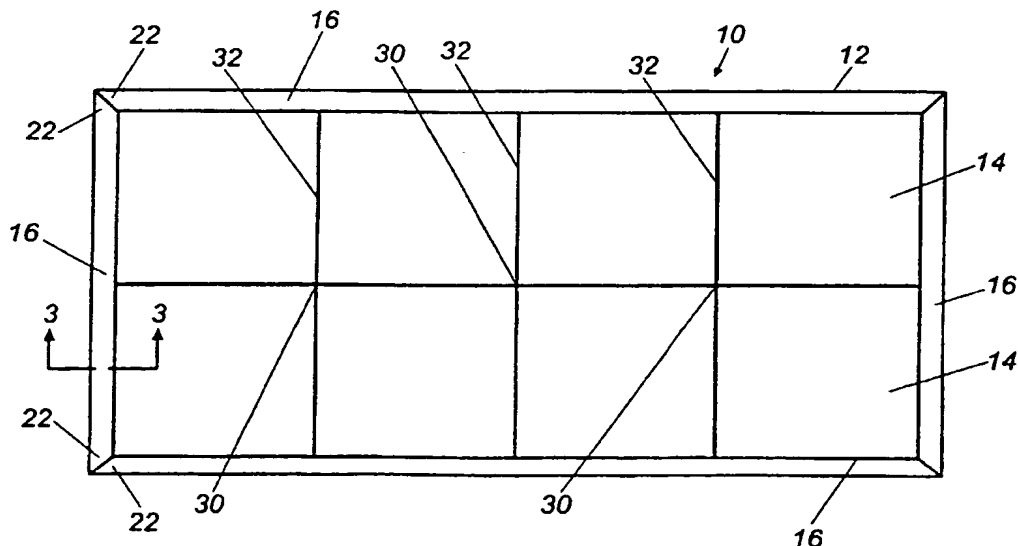
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GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI,
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patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,

[Continued on next page]

(54) Title: AREA FLOOR COVERING



(57) Abstract: A system and method for forming an area rug (10) using at least one replaceable wear surface (14) positioned on a floor or subfloor (24). The system includes a base (12) and at least one replaceable wear surface (14), of which both may be cut to fit a floor space of almost any shape. The system may be attached to the floor (24) using an adhesive, a double-side tape (29), or a cloth (28), with or without adhesive, or not attached at all. The cloth (28) can be applied coextensive to the base and replaceable wear surface, or intermittently, such as only at intersecting corners. The system can be sold to consumers as a self contained kit or as a group of components that can be separately selected.

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	US 5,634,309 A (Polen) 3 June 1997 (03.06.1997). See entire document.	1-6, 17-21
X ----- Y	US 6,093,469 A (Callas) 25 July 2000 (25.07.2000). See entire document.	1-6, 14-15, 17-21 ----- 8-13, 16
Y	US 5,706,623 A (Brown) 13 January 1998 (13.01.1998). See entire document.	16
X,Y	US 5,114,774 A (Maxim, Jr) 19 May 1992 (19.05.1992). See entire document.	1-21
X	US 5,438,809 A (Ehrlich) 8 August 1995 (08.08.1995). See entire document.	1-6, 18-20



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:		"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X -- Y	US 4,947,602 A (Pollasky) 14 August 1990 (14.08.1990). See entire document.	1-6, 17-21 ----- 7-16
X	US 5,018,235 A (Stamatiou et al.) 28 May 1991 (28.05.1991). See entire document.	1-6, 14, 17-21
X, Y	US 5,683,780 A (Rodger et al.) 4 November 1997 (4.11.1997). See entire document.	1-15, 17, 19-21

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